

SEC4 2015

The Leeds Graduate – the distinctive journey



UNIVERSITY OF LEEDS

Giving Context to Health Informatics

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School of Medicine



Academic Unit of Primary Care
LEEDS INSTITUTE OF HEALTH SCIENCES

Yorkshire Centre for Health Informatics
LEEDS INSTITUTE OF HEALTH SCIENCES



30 minute session - presentation and interactive demonstration of:

Clinical Information Systems for Patient Care (CIS4PC)

- How the University of Leeds interactively delivers **health informatics teaching** through **CIS4PC** content and
- how by working together we integrate **health informatics** and technology into **clinical teaching**

Health informatics and interactive use of technology are essential tools for health care providers/practitioners

... yet there is still limited access for students in a safe learning environment.

The health professionals of tomorrow **need to experience the technology** as students in order to be better practitioners when qualified.

All Health Professional Bodies (GMC / HPC / NMC) have specifications for qualifying students that support this.



Task Menu **Patient Clinical Summary** **Log out**

LIBURD, Jean Born 05-May-1942 (66 yrs 10 months) Gender Female CHI 060 542 0521
Address TOP FLAT, 77 OLD PARK ROAD, LEEDS, LS4 1JB

Patient Clinical Summary

Date	Term	Status
24-Mar-2009	Consent given for upload to local shared electronic record	
02-Feb-2009	Consent given for upload to local shared electronic record	
02-Feb-2009	Refused consent for upload to local shared electronic record	
30-May-2008	Letter from specialist	
30-May-2008	Medication increased	
28-May-2008	Thrush	
28-May-2008	Productive cough -green sputum	
28-May-2008	O/E - resp. examination NOS	
28-May-2008	O/E patient well	
19-May-2008	Thrush	

Issue date	Type	Drug	Dosage	Quantity
25-Mar-2009	R	SALBUTAMOL breath act pwrdr inh 100micrograms/actuation	INHALE 1 DOSE AS NEEDED	1
26-Feb-2009	A	PARACETAMOL caps 500mg	TAKE TWO 4 TIMES/DAY	80
26-Feb-2009	A	H-F ANTIDOTE topical gel 2.5%	10ML	25
26-Feb-2009	R	RABBIT FUR tabs 30c	TAKE 1 OR 2 AS DIRECTED	125
08-May-2008	R	GAUVISCON ADVANCE st oral susp	5 ml 4 times daily	500
08-May-2008	R	TELSARTAN/tabs 80mg	TAKE ONE ONCE	56

Date	Term	Status
25-Feb-2009	Very heavy smoker - 40+cigs/d	Smoker
25-Feb-2009	Alcohol consumption	Currently Drinks
28-May-2008	Never smoked tobacco	Never Smoked
10-Mar-2008	Non-smoker	Never Smoked
04-Jan-2008	Alcohol consumption	Currently Drinks
17-Dec-2007	Ex-smoker	Ex-smoker
20-Apr-2007	Never smoked tobacco	Never Smoked
01-Nov-2006	Never smoked tobacco	Never Smoked
20-Oct-2005	Never smoked tobacco	Never Smoked
07-Jan-2005	Never smoked tobacco	Never Smoked

Date	Term	Value	Units
19-May-2008	O/E - blood pressure reading	164/82	mmHg
08-May-2008	BM	28.1	kg/m2
08-May-2008	O/E - blood pressure reading	171/90	mmHg
08-May-2008	O/E - weight	65	kg
12-Dec-2007	O/E - blood pressure reading	148/83	mmHg
22-Nov-2007	BM	20.7	kg/m2
22-Nov-2007	O/E - height	1.52	Meters
22-Nov-2007	O/E - blood pressure reading	162/82	mmHg
22-Nov-2007	O/E - weight	48	kg
30-Oct-2007	O/E - blood pressure reading	172/82	mmHg



Health informatics technology is now common in both primary and secondary care settings

To ensure **healthcare professionals**
are better able to use
Clinical Information Systems (CIS)

and

that **the use of CISs** to teach **clinical medicine** is
maximised at undergraduate and postgraduate
levels and in continuing professional development.



What we do

Give under/postgraduate students access to a **live Clinical Information System (TPP *systemone*)**

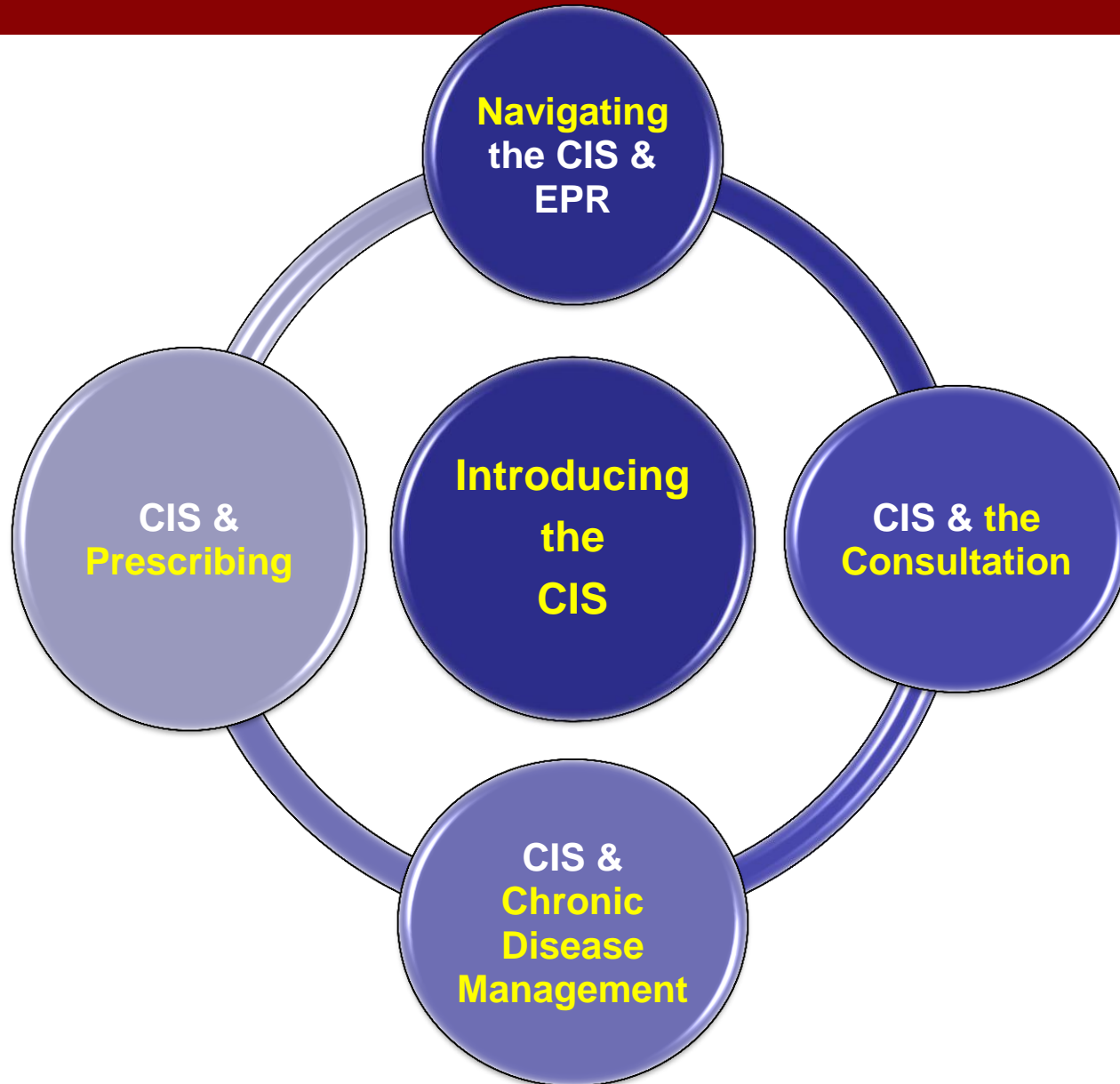
Don't "train to use the system", but enable students to **appreciate, access and navigate *any* Clinical Information System**

CIS4PC uses ***rich patient records*** developed with varying chronic diseases and backgrounds to aid the students' ***'live'*** learning experience.

Students access the ***live CIS***, using individual patient records to support their learning



Interactive sessions: focus



Example 1: Tool for Navigating CIS



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Student: «Surname», «First Name»

Clinical Information Systems for Primary Care (CIS4PC) Session 1 - TASK 1 – DATA ENTRY

To start this CIS: SystemOne
SystemOne has been set up on your Desktop.

Use the username and password shown in the next box to login to the system.

SystemOne username and password

Username: «Username»
Password: «Password»

New Patient Questionnaire

Welcome to the Worsley Medical Centre.

To allow us to offer the best service to you we need a few details about you and your health.

Patient Name «Patient_Forenames» «Patient_Surname» Address 3 St Michaels Terrace Leeds Postcode LS6 3BQ Mobile Number 079540475069 Home Number (0113)23934327	Date of Birth 08/07/1968 Place of Birth Northampton Ethnic Origin British Marital Status Married Next of Kin Husband Riley Occupation Retail buyer
--	---

Name and Address of previous GP: **Headingley Group Practice**
North Lane, Leeds LS6 8QR

Height: 168 cm **Weight:** 67 kg

Please circle what best describes you and your activities:

Smoking: Never Ex-Smoker **Smokes** - 18 per day

Exercise: Light **Moderate** Heavy

Alcohol: Units per week: 8
(Beer 2 pints/units, 2 short = 1 unit, 2 small glass of wine 2 units)

Your medical history: Please tick if you have ever suffered from:

Asthma Depression **Hypothyroidism** Diabetes Epilepsy
 Heart Attack or Angina Stroke COPD **High/Low Blood Pressure**

To the LEFT you will find a completed 'New Patient Questionnaire' form.

Your task is to:
[1] locate existing data and
[2] enter as much of the 'new data as possible into the CIS.

The patient has already been registered with these details.

They can be found via the 'Administration' tab to the left of the CIS screen

Administration

Information highlighted needs to be entered as indicated

Patient Profile template

Summary & Family History

Alcohol template

Set up as Active Problems

This will trigger READ CODES

New Patient Questionnaire (continued)

Please list any other medical conditions you have and any operations with the date they occurred:

Operation	Date
Appendectomy	1998

Allergies
Have you ever been allergic to any medication? Yes No
If yes, please list the medicines:

Drug	Date

Do you take any regular medication? Yes No
If yes, please list and attach a copy of your repeat medication slip

Drug	Dose
Indapamide	2.5mg daily
Perindopril	4mg daily
Levothyroxine	125mcg daily

Children's vaccination history: Please list all vaccinations:

Vaccination	Date

Ladies smear tests
Have you ever had a smear test? Yes No
When was your last smear test? 2003

Have your parents/siblings had any serious medical conditions? Yes No
If yes, please tell us which relation to you and what condition they have?

Relation/Current Age	Condition/Date of Occurrence
Mother, aged 70	Stroke when 80
Father, aged 63	Diabetes about 5 years

[FOR PRACTICE USE ONLY]

BP: 129/88
Urine Dip: NAD (No Abnormality Detected) (Negative)
Recorded on system:
Letter to follow:
Indicators:

Enter using READ CODE
Summary & Family History

Enter in Sensitivities and Allergies

Set up each medication as a Repeat Prescription and link it to the health problem

Enter using READ CODE and date in:
Summary & Family History

Enter using FH button in
Summary & Family History

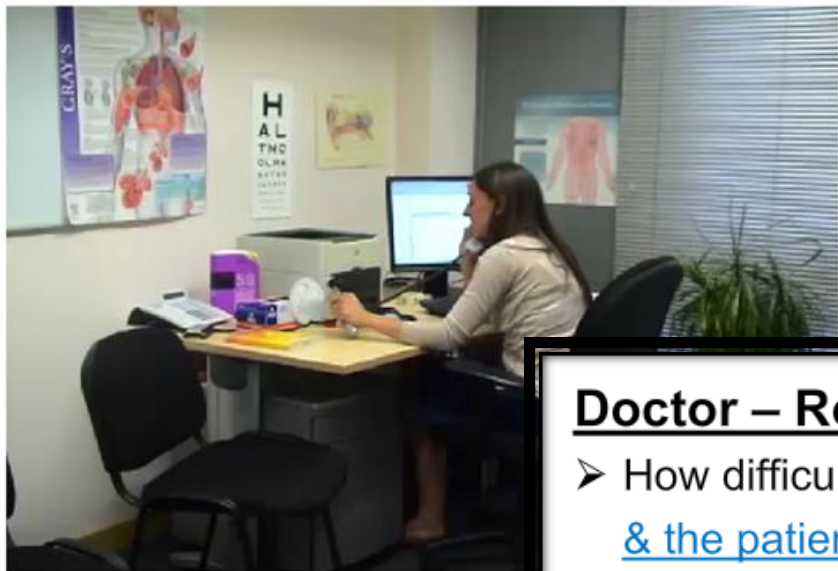
Enter in patient profile template

Enter in urinalysis template

Example 2: Tools used for exploring use of the CIS in a consultation



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Doctor – Role Play

- How difficult was it to remain focussed on the consultation & the patient as opposed to the consultation & the CIS?
- Did the feedback raise issues you were **NOT aware of?**

Patient/Observer – Role Play

- How easy was it to construct feedback whilst playing the patient?
- What were the key issues that need to be addressed in order to 'effectively use the computer in the consultation'?

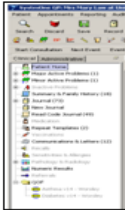
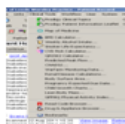
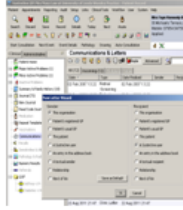
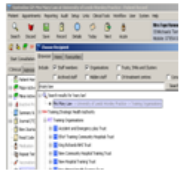
Example 3: Tool used in Chronic Disease Management session



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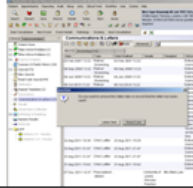
CIS 4 Patient Care

Handout to support teaching

Input the log in details and specific PATIENT on your OWN log in sheet			
Task	Content	Advice	Done
1	Access and interrogate the patient's electronic record	Look into the patient record to find relevant details and basically how to navigate the system	
2	Complete the Diabetes template	This can be found in the table to the left of the screen titled ' CLINICAL '. At the bottom is ' QOF ' Click on the ' + ' sign and you will find the template. Right Click on the template to open it. BP 164/96 ECG Normal	
3	Complete QRisk2 Calculation	In the titles header bar you will find 'Clinical Tools' select and complete	
4	Send a referral to the Dietician	There are several ways this can be done: In the table to the left of the screen titled ' CLINICAL ' <ul style="list-style-type: none"> - select 'Communication & Letters', - Right Click, select 'New Letter' <ul style="list-style-type: none"> o Sender 'This organisation' o Recipient 'A SystemOne user' o Select 'OK' - Type in (name of session lead) [then search] o Select 'OK' <p>RECIPIENT: pre filled in</p>	 

CIS 4 Patient Care

Handout to support teaching

		<p>SENDER: Add your own name</p> <p>WRITING:</p> <ul style="list-style-type: none"> o Letter Type: select 'Referral' o Editor: select 'MS Word' o Template: select 'Diabetes Referral Form' <p>- Select 'Write Now'</p> <p>If any 'error' messages appear, click 'okay' until referral opens.</p> <p>- select 'Send' or 'Amend later'</p>	 
5	Prescribe / Review appropriate medication	Consider the information gained at the consultation. What medication needs added to the patient's current medication?	
6	Send a task to another professional involved in patient's care	In the titles header bar you will find either the icon ' Task ' or under the Workflow header ' New Task ' Select: University Worsley Practice , Send to: (name of session lead)	
7	Generate a prescription and a ' repeat medication template '	DO NOT PRINT	
8	Record the consultation Apply clinical coding (QOF) as appropriate for audit purposes	Using the ' Start Consultation ' box, record your experience with the patient	



Recording Patient Data

A new **patient** registers with the practice and completes a paper *“New Patient Questionnaire”*.

Administration staff enter the *general information* and have *requested record access/transfer*.

Access to the record is achieved and the **form** is passed to a member of the **Medical Team** to enter *health information* from the *“New Patient Questionnaire”* prior to meeting the patient.

Your task is to enter this information!

New Patient Questionnaire



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«Student 1»

STUDENT EDUCATION CONFERENCE 2015
University of Leeds

Giving context to health informatics
Clinical Information Systems for Patient Care (CIS4PC)

SystemOne Login Username: «Username»

SystemOne Password: «Password»

New Patient Questionnaire

Welcome to the [Worsley Medical Centre](#).

To allow us to offer the best service to you we need a few details about you and your health.

Patient Name «Patient_Forename» «Patient_Surname»	Date of Birth 08/07/1968
Address 3 St Michaels Terrace Leeds	Place of Birth Northampton
Postcode LS6 3BQ	Ethnic Origin British
Mobile Number 079540475069	Marital Status Married
Home Number (0113)23934327	Next of Kin Husband Riley
	Occupation Retail buyer

Previous GP Name/Address: [Headingley Practice, North Lane, Leeds LS6 8QR](#)

Record Sharing Consent: Do you consent to (1) Sharing of your data recorded here with other organisations that may care for you? Yes No
(2) Viewing of data by this organisation that is recorded at other care services that may care for you Yes No

Height: cm Weight: kg
Smoking: - per day
Alcohol:
(Beer 1 pint=2units, 1 short = 1 unit, 1 small glass of wine 1.5units)

Your medical history: Please tick if you have ever suffered from:
Asthma Hypothyroidism Diabetes Epilepsy
Heart Attack Stroke COPD Blood Pressure
Angina Depression

To the LEFT you will find a completed 'New Patient Questionnaire' form.

Your task is to:
[1] locate existing data and
[2] enter as much of the 'new' data as possible into the CIS.

The patient has already been registered with some of these details.

In the record they can be found via the 'Administration' tab to the left of the screen

[Clinical](#) [Administrative](#)
[England \(Home\)](#)

Record CONSENT (seen on opening record)

Information highlighted needs to be entered as indicated:

Patient Profile template

Alcohol template

Check this is already recorded as an ACTIVE PROBLEM

This will have a specific READ CODE

New Patient Questionnaire (continued)

Please list any other medical conditions you have and any operations with the date they occurred:

Operation	Date
Appendectomy	1998

Allergies
Have you ever been allergic to any medication? Yes No
If yes, please list the medicines:
Drug _____ Date _____

Do you take any regular medication Yes No
If yes, please list and attach a copy of your repeat medication slip
Drug _____ Dose _____

Children's vaccination history: Please list all vaccinations:
Vaccination _____ Date _____

Ladies smear tests
Have you ever had a smear test? Yes No
When was your last smear test?

Have your parents/siblings had any serious medical conditions? Yes No
If yes, please tell us which relation to you and what condition they have?
Relation/Current Age Condition/Date of Occurrence
Mother, aged 70 Stroke when 60
Father, aged 63 Diabetes about 5 years

[FOR PRACTICE USE ONLY]

BP:
Urine Dip:
Recorded on system:
Letter to follow:

Enter in :

[Summary & Family History](#)
using a READ CODE

Enter in Sensitivities and Allergies

Check there are NO current medications listed
Medication

Check these are recorded in

[Summary & Family History](#)

[FH](#)
Enter using FH button in

[Summary & Family History](#)

Using the Patient's **Electronic Health Record** and their “**New Patient Questionnaire**” form:

Explore the patient's **record** as you might do prior to a **consultation/interaction**:

- ✓ Enter any new **health** information
- ✓ Check their **medical problems / history** and add any not listed
- ✓ Record any **comments / prompts** for the next practitioner who might see the patient



Logging on to TPP SystemOne

The screenshot shows the SystemOne login page. At the top left is the 'systemone' logo with the tagline 'ONEPATIENTONERECORD'. At the top right is the 'tpp' logo. The main content area features two authentication options: 'Smart Card Authentication' with a 'Log on with NHS Smart Card' button, and 'User Name & Password Authentication' with input fields for 'User name' (containing 'marylaw0101') and 'Password', and a 'Log on' button. Two yellow callout boxes with black arrows point to the input fields: the first points to the 'User name' field with the text '1st Enter the allocated user name', and the second points to the 'Password' field with the text '2nd Enter the allocated password'. At the bottom of the page is a row of ten stylized human figures in various medical uniforms (doctors, nurses, paramedics, etc.) holding hands. The Windows taskbar at the very bottom shows the Start button, several application icons, and the system tray with the date '17 November 2011' and time '16:26'.

1st Enter the allocated user name

2nd Enter the allocated password



Searching for a Patient

The screenshot shows the 'SystemOne GP: Mrs Mary Law at University of Leeds Worsley Practice - Home' window. The interface includes a menu bar (Patient, Appointments, Reporting, Audit, Setup, Links, Clinical Tools, Workflow, User, System, Help), a toolbar with icons for Search, Discard, Save, Record, Details, Today, Next, and Acute, and a 'Configure Home Screen' section with various functional icons like Appts, Visits, Tempits, Status, Changes, Notify, Tasks, Chat, Appts, Visits, Path, and Scan. A 'Quick Patient Search' dialog box is open, featuring a 'Name search' input field, a 'Search' button, and a 'Select' button. Three yellow callout boxes with arrows point to the 'Search' button, the input field, and the 'Select' button, respectively.

1st Click on 'Search' box

2nd Type in patients name

3rd Left 'click' on 'Select'

Inputting Patient Information



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Template Entry: Patient Profile

Previous Recordings | **Detail**

05 Oct 2010	1.68 m (5' 6")
05 Oct 2010	67.0 Kg (10 st 8 lb)
05 Oct 2010	23.74 Kg/m ²
05 Oct 2010	Smoker (137R.)

Patient Profile | Blood Pressure | Smoking

Height	<input type="text"/>	m			
Weight	<input type="text"/>	Kg			
BMI	<input type="text"/>	Kg/m ²			
Peak Expiratory Flow Rate	<input type="text"/>	L/min			
Smoker	<input type="text"/>				
Ideal body weight	<input type="text"/>	Kg			
Waist circumference	<input type="text"/>	cm			

Recall | Pathology Report | **Ok**

Input during a consultation: guidelines and templates



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Weekly Alcohol Intake [X]

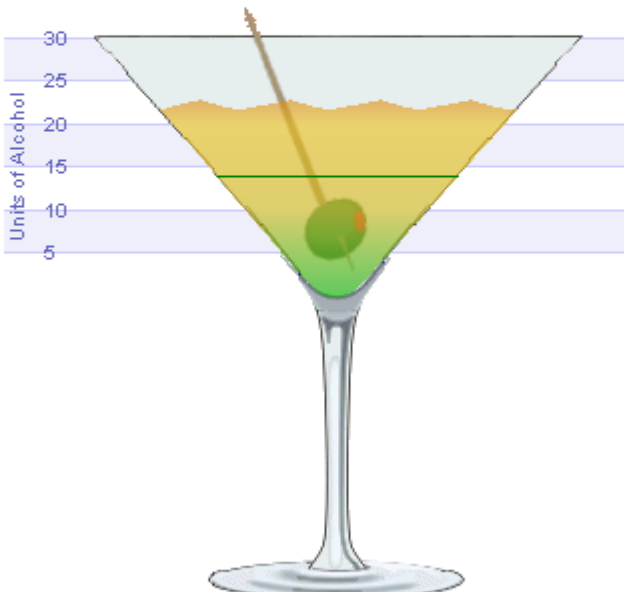
Pints of beer

Bottles of wine

Measures of spirits

Units of alcohol

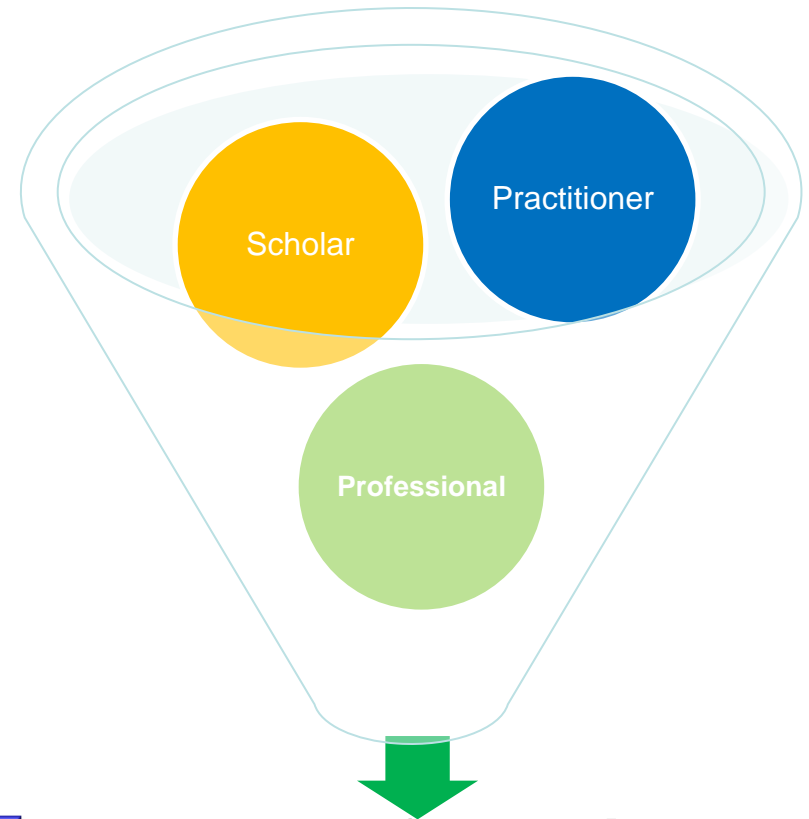
Gender Male Female



The image shows a martini glass with a green olive and a stirrer. The glass is filled with a yellow liquid. To the left of the glass is a vertical scale labeled 'Units of Alcohol' with horizontal grid lines at 5, 10, 15, 20, 25, and 30. The liquid level in the glass is at the 22-unit mark.

The health professional as:

- a scholar
- a practitioner
- a professional



The teaching can combine the three essential disciplines of scholar, practitioner and professional.

Health Informatics

Outcome: An effective health practitioner who can....



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Apply the principles, method and knowledge of health informatics to medical practice

Use information effectively in a medical context

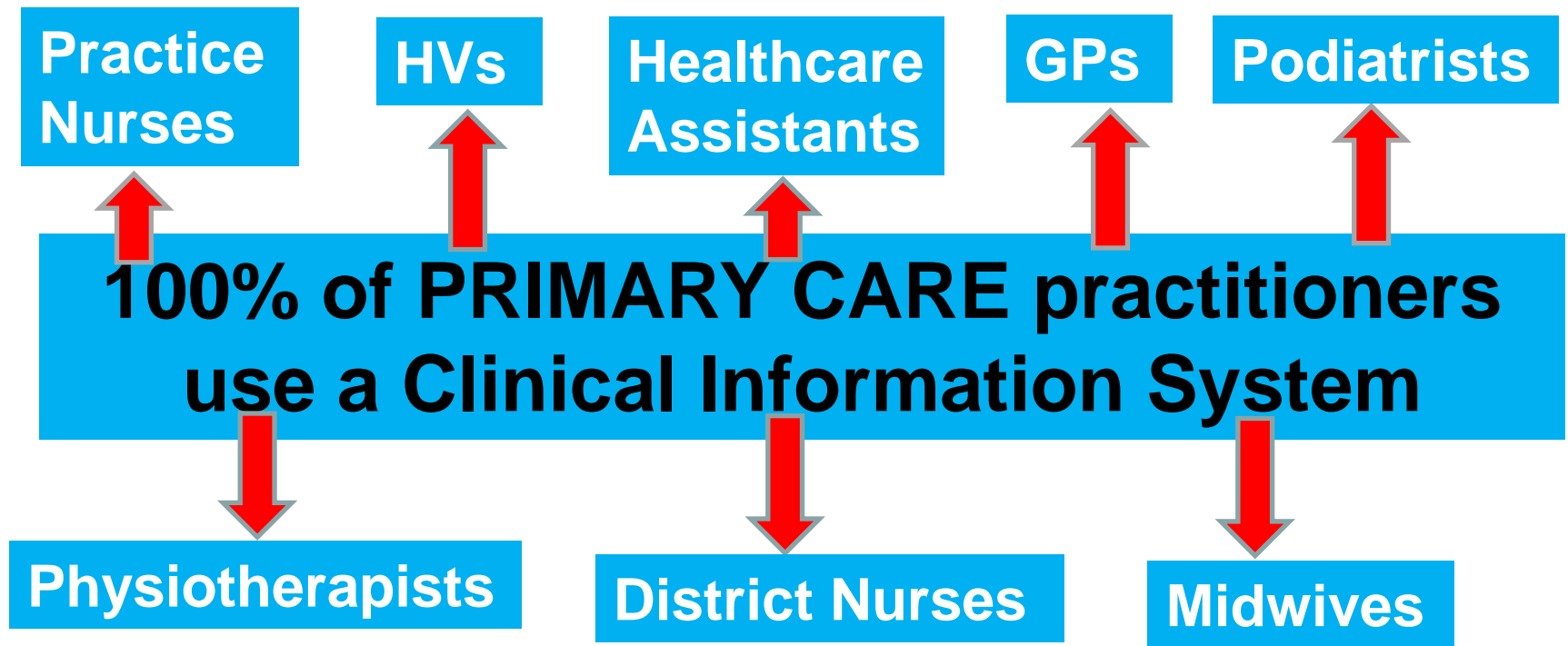
Keep to the requirements of confidentiality and data protection legislation and codes of practice in all dealings with information

Make effective use of computers and other information systems, including storing and retrieving information

Access information sources and use the information in relation to patient care, health promotion, giving advice and information to patients, and research and education



Coverage /Use



CIS4PC content is transferable/adaptable for all healthcare students:

Resources currently delivered within West Yorkshire

University of Leeds: **MBChB & Nursing;**

University of Bradford: **Nursing, Midwifery, Radiography, Occupational Therapy, & Physiotherapy**

2250 medical students, over 1000 nursing and allied health students

...and counting!



Any Questions?

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